



TITLE:

Synthesis of Condensation Polymer Having Pyrrolidone Group

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ABSTRACTS

decarboxylative cleavage of oxazolidone rings in the polymer by refluxing with phosphoric acid followed by an alkaline treatment yielded an anion exchange resin of polyimine type. For example, a brown hard resin, having the exchange capacity of 3.2 meq/g, was, obtained from the addition polymer of tetramethylene diisocyanate with hydroquinone diglycidyl ether.

Syntheses of Polymers Having two Different Groups in 2:1 Ratio by Polycondensation

Masaya OKANO, Sohei TOKIURA, Akira MIYASU
and Ryohei ODA

*Kobunshi Kagaku (Chemistry of High
Polymers)* 17, 562 (1960)

Some diesters and diurethanes were prepared by the reactions of N-carbethoxy- ϵ -aminocaproyl chloride, 5-carbethoxy-pentylisocyanate, or N-carbethoxy-6-aminohexylisocyanate with ethyl ϵ -aminocaproate, ethyl ϵ -oxycaproate, N-carbethoxyhexamethylenediamine, or N-carbethoxy-6-aminohexanol. They contain one amide, urea, or urethane group in polymethylene linkage between two terminal ester or urethane groups. Syntheses of polymers having the regular structure of -A-A-B-type were attempted by the polycondensation reactions between the compounds described above and aliphatic diamines, diols, or dicarboxylic acids of 6 or 9 carbon atoms. Among hem polyamideureas showed a good fiber-forming property.

Synthesis of Condensation Polymer Having Pyrrolidone Group

Ryohei ODA, Sohei TOKIURA, Fujio MISUMI
and Masaya OKANO

*Kobunshi Kagaku (Chemistry of High
Polymers)* 17, 685 (1960)

Some bi-functional compounds containing one or two pyrrolidone rings were synthesized by the reaction of itaconic acid with ethylenediamine, hexamethylenediamine, and N-carbethoxyhexamethylenediamine etc., in water or basic solvent such as pyridine. By the polycondensation reaction between these compounds and aliphatic diamines, the polymers having amide or amide-urea groups were prepared. They have shown fiber-forming property, but are not suitable for textiles owing to their water-soluble property. Compared with polyvinyl-pyrrolidone (Albigen A), these polymers showed somewhat lower stripping power.